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ART UNIT	PAPER NUMBER
3629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/687,224	SHAO-CHI ET AL.	
	Examiner	Art Unit	
	BOB CHUMPITAZ	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *7/16/2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-19 and 21-24* is/are pending in the application.

4a) Of the above claim(s) *13 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14-19 and 21-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The following is a Final Office action in response to communications received July 16, 2008. Claims 13 and 20 have been canceled. Claims 1-6, 8, 14-19 and 21-22 have been amended. Claims 23 and 24 have been added. Therefore, claims 1-12, 14-19 and 21-24 are pending and addressed below.

Response to Amendment

Applicant's amendments to the claims are not sufficient to overcome the 35 USC 101 rejections set forth in the previous office action. As per Applicant's amendment to claim 8, the claimed objection set forth in the previous office action is hereby withdrawn.

Claim Objections

Claim 3 is objected as failing to underline new amended matter: "providing the collected exchanged information and the collected event information". See MPEP 714.

Applicant's remarks are objected due to the following informalities:

(1) The header is incorrect: "U.S. Application No. 10/687,227" is recited, instead of current Application No. 10/687,224.

(2) Under the Remarks heading (Pg. 6, paragraph 1) Applicant recites: "claims 1-6, 8, 14-18 and 21-22 are presently amended". However, claim 19 is not hereby listed as containing amended matter.

(3) Under the Claim Rejections - 35 USC §101 heading, Applicant recites; "claim 1

has been amended to be directed to a method as have claims 14 through 20…" However, claim 20 is cancelled.

(4) Under the New Claims heading, Applicant recites: "Furthermore, claims 23 require transmitting a process parameter and performance of a quality control function respectively…" It appears Applicant failed to include claim 24.

Appropriate corrections are required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12, 14-19 and 23-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 and 6 recite a method comprising the step of "maintaining an exchange of information", "assigning a predetermined event element", "collecting the exchanged information", "providing the collected exchanged information", "exchanging a product", "assigning event elements to the product", "transmitting information", "storing information" and "providing the portion of the transmitted information" which could equate to software components. Based on Supreme Court precedent, a proper process must be tied to another statutory class or transform underlying subject matter to a different state or thing (*Diamond v. Diehr,* 450 U.S. 175, 184 (1981); *Parker* v. *Flook,* 437 U.S. 584, 588 n.9 (1978); *Gottschalk v.*

Benson, 409 U.S. *63,* 70 (1972); *Cochrane* v. *Deener,* 94 U.S. 780,787-88 (1876)). Since neither of these requirements is met by the claim, the method is not considered a patent eligible process under 35 U.S.C. 101. To qualify as a statutory process, the claim should positively recite the other statutory class to which it is tied, for example by identifying the apparatus that accomplished the method steps or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Claims 2-5 and 7-12, 14-19, 23-24 depend from clam 1 and claim 6 respectively, and do not cure the deficiencies set forth above. Therefore, claims 2-5 and 7-12, 14-19, 23-24 are also rejected as being directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Yang et al. US 2003/0233290 A1 (hereafter Yang).

As per claim 21, Yang discloses A a computer readable medium including computer-readable instructions ***for tracking and managing*** a plurality product and information through a semiconductor manufacturing environment the computer-readable instructions comprising:

instructions ***for establishing*** a virtual fab with a plurality of entities, each entity associated with an internal process to a semiconductor fab or an external process to the semiconductor fab (¶ [0071, software block diagram for the supply chain management system, see Fig. 10 and associated text]; see also, ¶ [0070, hardware block diagram, see Fig. 9 and associated text]);

instructions ***for a plurality of event elements for tracking*** the product through the plurality of entities of the virtual fab, wherein a plurality of event elements are provided for each of the plurality of entities of the virtual fab (¶ [0080, base lot field is a derived number indicator used for tracking the lot for a buyer through all the suppliers]; see also, ¶ [0136, lot tracking report]);

instructions ***for a communications interface*** for interacting with a enterprise control entity and the plurality of event elements (¶ [0021 i-commerce onscreen operations or other methods of communication]; see also, ¶ [0050, internet communication means between buyers and multiple suppliers, see Fig. 1 and associated text]);

instructions ***for controlling the product quality***, wherein the product quality may be controlled by at least two of the plurality of entities (¶ [0068-0069 supply chain management system containing a multi-lot processor with communication means via internet]; see also, ¶ [0059 supply chain parameter such as quantity, quality, and delivery

time]; see also, ¶ [0092-0093 data integrity unit includes a data checking unit and data cleansing to improve quality of data]);

instructions ***for determining a future location*** for the product and the associated information through the virtual fab via the enterprise control entity (¶ [0165-0167, lot tracking data used for all the production]; see also, ¶ [0025, lot tracking maintenance such as cycle time, yield analysis, cost reporting each stage of the supply chain]; see also, ¶ [0085-0087, estimated finished good is calculated based on the standard cycle time of each stage]); and

instructions ***for amending the associated information*** to the recordable medium through the virtual fab (¶ [0072, via communication over the internet data is converted via converter and stored in the raw data store]).

As per claim 22, Yang discloses wherein the plurality of entities include:

at least one entity associated with a primary provider manufacturing executing system in the virtual fab (¶ [0010, dominating buyer or dominating supplier]);

at least one entity associated with a secondary provider manufacturing executing system in the virtual fab (¶ [0010, dominating buyer or dominating supplier]);

at least one entity associated with a manufacturer of the semiconductor equipment vendor (¶ [0009-0010, outsourcing semiconductor manufacturing industry between buyers and suppliers);

at least one entity associated with a manufacturer of the sub-contractor (¶ [0173, reporting accuracy among multiple suppliers and multiple buyers and multiple suppliers]);

at least one entity associated with a manufacturer of the semiconductor design house (¶ [0019, IC-design house deals with multiple suppliers that provide various outsourcing functions at different supplier stages]);

at least one entity associated with a customer of products being manufactured by the semiconductor fab (¶ [0069, multistage supply chain environment for multiple buyers and multiple suppliers]; see also, ¶ [0132-0133, multiple supplier branch in a supply chain transaction); and

at least one entity associated with engineering support for the either or both of the primary and second manufacturing executing system (¶ [0178, production control engineers and other production control personnel]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 6, 7, 11, 12, 14-19 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Arackaparambil et al. US 2002/0156548 A1 (hereinafter Arackaparambil).

As per claim 1, Yang discloses a method comprising:

maintaining an exchange of information between a primary provider and a secondary provider, the information pertaining to the semiconductor-related product (¶ [0015, 0025 global processor provides reports for numerous data types including activity-based transaction reports including detail for each buyer and supplier stage]; see also, ¶ [0056, Multi-Lot Processor where buyers and suppliers communicate in the supply chain management system], see Fig. 4 and associated text; see also, ¶ [0070, a two-way communication redundancy process for providing services to the buyers and suppliers (clients) via a network]; see also, ¶ [0073, database holding information using the supply chain management system]; see also, claim 2: maintaining information in supply chain management system);

Yang does not explicitly disclose assigning a predetermined event element to the semiconductor-related product at the secondary provider, wherein the predetermined event element includes a product-specific process parameter.

However, Arackaparambil teaches wherein visual workflow component defines and executes manufacturing processes and is capable of executing predetermined business processes (¶ [0017, 0077]). In addition, Arackaparambil teaches wherein the quality management component provides quality analysis and flexible data collection in order to ensure conformance to predetermined business rules (¶ [0083]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the supply chain management system of Yang to include predetermined business processes and rules as taught by Arackaparambil in order to optimize process control, quality, yield and cost reduction to help improve the fab management processes.

Yang further discloses, collecting the exchanged information (¶ [0072, correlation processor for correlating input and output information among clients]);
Yang further discloses, collecting event information upon an occurrence of a predetermined event element associated with the semiconductor-related product (¶ [0006, internet is an electronic link among buyers and suppliers for exchange of supply chain information]); and

Yang further discloses, providing the collected exchanged information and the collected event information to a customer associated with the semiconductor-related product (¶ [0093, reports that show work in progress information]).

As per claim 2, Yang and Arackaparambil disclose claim 1, as rejected above, wherein Yang further discloses wherein the assigning the predetermined event element to the semiconductor-related product at the secondary provider is performed by the primary provider (¶ [0071, business logic means for accessing information for executing supply chain management functions for the clients]).

As per claim 3, Yang and Arackaparambil disclose claim 1, as rejected above, wherein Yang further discloses wherein the maintaining an exchange of information uses a first network for exchanging information between the primary and secondary providers, and the providing the collected exchanged information and the collected event information uses a second network, different from the first network (¶ [0035, hardware block diagram of a computer system network for the supply chain management system; see Fig. 9 and associated text]; see also, ¶ [0070, computer system network]).

As per claim 4, Yang further discloses wherein the maintaining an exchange of information uses a dedicated bi-directional path of the first network, and wherein the collecting the exchanged information provides continuously collecting the exchanged information (¶ [0015 continuously

updated data base]; see also, ¶ [0070, 0208, supply chain management services to the buyers and suppliers in a network via internet connection]).

As per claim 5, Yang and Arackaparambil disclose claim 1, as rejected above, wherein Yang further discloses wherein the providing the collected exchanged information and the collected event information includes using an enterprise control system that includes a customer interface in the form of a web browser (¶ [0179, onscreen operations or other i-commerce methods of communication provided to buyers and suppliers]; see also, ¶ [0070, supply chain management service]).

As per claim 6, Yang discloses a method of business-to-business exchange between providers in a semiconductor manufacturing environment, the method comprising:

> exchanging a product from a primary provider to a secondary provider (¶ [0009, in order to have efficient and economical supply chain management, the interrelationship among each buyer and the upstream and down stream suppliers requires an exchange of "current" information that permits real-time visibility into the status of the supply chain, fast identification of abnormal events and other information that permits exception management]; see also, ¶ [0021, supply chain management system performs alert processes based upon alert conditions for specific events/reports/process of the supply chain and wherein the alert reports are accessible to clients]; see also, ¶ [0070, a two-way communication redundancy process for providing services to the buyers and suppliers (clients) via a network]);

Yang does not explicitly disclose assigning event elements to the product through the virtual fab, wherein the event elements include a plurality of process steps performed by the secondary provider (Yang: ¶ [0131-0136 multiple supplier branch in a supply chain transaction]);

However, Arackaparambil teaches wherein visual workflow component defines and executes manufacturing processes and is capable of executing predetermined business processes (¶ [0017, 0077]). In addition, Arackaparambil teaches in-process tests and monitoring of processing parameters are utilized to determine whether a given in-process product or process problem or defect indicates that intervention in the process is necessary, such as making a processing adjustment or aborting the run. Furthermore, product and process control techniques are used extensively throughout the wafer fab (¶ [0014]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the supply chain management system of Yang to include product and process control techniques as taught by Arackaparambil in order to provide a means of assigning event elements to the product process which will help improve the fab management processes.

Yang further discloses, transmitting information associated with the product throughout a

virtual fab, wherein the transmission of information occurs continuously and multi-directionally between the providers through the virtual fab (¶ [0005, exchanging information among buyers and suppliers]; see also, ¶ [0050, multiple buyers and multiple suppliers are able to exchange information over the internet]),

Yang further discloses, and wherein the information is associated with the assigned event elements, and wherein the information includes a time of an event element and a quantity of the product yielded (¶ [0025, lot tracking maintenance such as cycle time, yield analysis, cost reporting each stage of the supply chain]; see also, ¶ [0085-0087, estimated finished good is calculated based on the standard cycle time of each stage]);

Yang further discloses, storing at least a portion of the transmitted information (¶ [0072, the processed data is stored in the processed data store which can be communicated to the clients]); and

Yang further discloses, providing the portion of the transmitted information to a customer in response to a customer request (¶ [0072, the processed data is stored in the processed data store which can be communicated to the clients]; see also, ¶ [0186, buyer request]).

As per claim 7, Yang further discloses wherein the primary provider is a semiconductor fab and the product is a lot of semiconductor wafers (¶ [0059, semiconductor manufacturing environment

where both goods and services are involved with wafer lots]; see also, ¶ [0063, input is a wafer lot]).

As per claim 11, Yang further discloses wherein the information includes product lot identification and product lot history (¶ [0024-0025, lot tracking stores the genealogy of a lot and lot history], see also, ¶ [0165, lot tracking]).

As per claim 12, Yang further discloses wherein the step of providing uses a service system interface for communicating between a computer system associated with the customer and a computer system associated with the semiconductor fab (¶ [0179, onscreen operations or other i-commerce methods of communication provided to buyers and suppliers]; see also, ¶ [0070, supply chain management service]).

As per claim 14, Yang further discloses wherein the primary provider is a semiconductor fab facility (¶ [0020, buyer and supplier within the semiconductor manufacturing industry).

As per claim 15, Yang further discloses wherein the secondary provider is a sub-contractor (¶ [0020, assembly supplier]).

As per claim 16, Yang further discloses wherein the primary provider is a semiconductor design house (¶ [0019, IC-design house deals with multiple suppliers that provide various outsourcing functions at different supplier stages]).

As per claim 17, Yang further discloses wherein the secondary provider is a equipment vendor (¶ [0020, assembly supplier]).

As per claim 18, Yang further discloses wherein the event elements of the primary provider and secondary provider comprise product process steps to occur at the secondary provider, the event elements track the product through the virtual fab (¶ [0059, semiconductor manufacturing environment processing stages including fab, wafer sort, assembly and final test]).

As per claim 19, Yang further discloses wherein the event elements include manufacturing process checkpoints (¶ [0062, purchase orders for multistage processing in order for work to be performed through the stages by authorization and specifying the terms and conditions]; see also, ¶ [0134, data integrity unit 88-6 on Fig. 11]).

As per claim 23, Yang further discloses the method of claim 6, wherein the transmitting information includes the primary provider transmitting a process parameter of a process performed by the secondary provider to the secondary provider based on the received information (¶ [0070 data server for a two-way communication redundancy process for providing services to the buyers and suppliers (clients) via a network]);

As per claim 24, Yang further discloses the method of claim 6, further comprising: the primary provider performing quality control function at the secondary provider using the information

received (¶ [0068-0069 supply chain management system containing a multi-lot processor with communication means via internet]).

Claims 8, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Luce et al. U.S. 7,356,558 (hereinafter referred to as Luce).

As per claim 8, Neither Yang or Arackaparambil expressly disclose wherein the assigning event elements to the product through the virtual fab includes the secondary provider defining an event element and the primary provide modifying the event element.

However, Luce teaches assigning the manufacturing route and path in the production process for the work order (col. 11, line 60 - col. 12, line 7; see also Fig, 3 and associated text). In addition, Luce teaches wherein independent supplier's facilities that act as contract manufacturing sites for a primary supplier and other facilities communicate via a network (col. 2, line 51 – col. 3, line 4). Furthermore, Luce teaches wherein the department in charge of inventory and/or finance assigns an inventory status to each manufacturing operation and a management component wherein the inventory status serves to identify locations and to enforce proper inventory movements and an inventory location is a defined location in a plant or other facility (col. 10, line 55 - col. 11, line 18).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the semiconductor manufacturing environment of Yang and product and business process control of Arackaparambil to include the manufacturing path and sequence of production steps as taught by Luce in order to create data consistency

between suppliers to buyers and have a means for monitoring and controlling manufacturing processes where both parties are better able to control the overall cost.

As per claim 9, Neither Yang or Arackaparambil expressly disclose wherein the event elements include process completion at a predetermined check point

However, Luce teaches a way of validating and checking inventory movement in order to track down any types of errors that can lead to routing failure (col. 10, lines 30-54, set inventory valuation points in the inventory valuation system; see also, col. 12, lines 48 – col. 13, line 31, validation process to track and check inventory).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the semiconductor manufacturing environment of Yang and product and business process control of Arackaparambil to include the validation and checking procedure as taught by Luce in order for the valuation points in an inventory valuation system to reduce errors involved in the production of the product to be manufactured which helps maintain the lowest cost production possible.

As per claim 10, Neither Yang or Arackaparambil expressly disclose wherein the event elements of the primary provider and the secondary provider comprise product process steps, the event elements track the product through the virtual fab.

However, Luce teaches a quality audit, production, and supplies tracking elements to monitor and control the entire manufacturing process between primary manufacturer and

suppliers (col. 3, lines 18-56, primary manufacturer receives manufacturing related data and other tracking data from independent supplier via a network or the like).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the semiconductor manufacturing environment of Yang and product and business process control of Arackaparambil to include a manufacturing process that monitors and controls the manufacturing steps as taught by Luce in order to improve supply chain management methods which will help reduce time delays, costs of goods and services.

Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Please note:

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use,

then it meets the claim. See *e.g. In re Collier*, 158 USPQ 266, 267-68 (CCPA 1968) (where the court interpreted the claimed phrase "said ferrule-forming member being crimpable onto said shield means" and held that the shield means was not a positive element of the claim since "[t]here is no positive inclusion of 'shield means' in what is apparently intended to be a claim to structure consisting of a combination of elements." As a courtesy, the Examiner has bolded and italicized the claim language considered as intended use.

Response to Arguments

Applicant's arguments filed 07/16/2008 have been fully considered but they are not persuasive. In the remarks, Applicant argues:

(1) For claims 1, 6 and 21, Yang does not provide a limitation directed to a plurality of event elements occurring at, for example, a single provider.

(2) In regards to Office Action Pg. 6, Examiner appears to asset that a plurality of event elements as being provided by Yang's disclosure of fab, wafer sort, assembly, and final test manufacturing stages. However, these stages do not provide, for example, for process steps at a secondary provider.

(3) The Examiner's citation of Yang's providing for a plurality of different suppliers, is different than providing a plurality of event elements within a single supplier's performed process. Therefore the rejections are not supported by the Yang reference and should be withdrawn.

(4) In regards to Office Action Pg. 10, Examiner also indicated elsewhere in the office action that "Yang…does not explicitly disclose assigning event elements." Instead asserting that Luce provides for such.

(5) For example, claim 6 as amended, "the information includes a time of an event element and a quantity of the product yielded." There is no indication in the cited portion of Luce of the time an event element occurred and/or a yield, moreover, there is no suggestion by Luce of communicating from a secondary provider to a primary provider.

(6) Claim 1, as amended, requires the event element include a "product-specific process parameter." A sequence of steps does not provide a process parameter to be used in one or more of the steps.

(7) Claim 21, as amended, also requires controlling the product by at least two of the plurality of entities. Control of product quality is not suggested by the cited portions of Luce and/or Yang.

(8) Claim 8, as amended, requires an event element being defined by a secondary provider and modified by a primary provider. The cited portion of Yang and Luce provide no indication of modification of an event element by a primary provider.

(9) Claim 22 requires at least one of the plurality of different entities. Yang does not indicate a system where all of these entities are using the same system. For example, the Examiner's cited paragraph [0019] of Yang provides that the process may be useful for an IC-design house, but does not suggest combination of an IC design house, with a semiconductor equipment vendor, for example.

(10) Examiner appears to assert that the equipment vendor is provided by a discussion of "outsourcing manufacturing industry between buyers and suppliers." Applicant respectfully disagree, as is the term would be interpreted in light of the specification and one skilled in the art, the equipment includes the hardware and software tools, for example, included in a fab facility.

(11) In reference to claim 17, Applicants argument no. 10 regarding equipment vendor also applies. An equipment vendor is not disclosed by mere indication of an assembly supplier.

In response to argument:

(1): Examiner respectfully disagrees. See rejection above.

(2) and (3): Examiner respectfully disagrees. Arguments (2) and (3) pertain to cancelled claim 13 on Office Action Pg. 6, therefore the arguments are moot.

(4): Examiner respectfully disagrees. As admitted by the Examiner and acknowledged by the Applicant on page 10 of the remarks, Yang does not explicitly disclose assigning event elements. Luce teaches wherein the manufacturing path assigns a particular route for sequence of steps of production (col. 11, line 60 – col. 12, line 7). It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made,

and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, both Yang and Luce are analogous prior art to the current invention. Further, Yang discloses a semiconductor manufacturing environment. Luce teaches the manufacturing path and route for the production process. Therefore, by including the manufacturing path and route of Luce in the semiconductor manufacturing environment of Luce, the provider(s) would be able to assign manufacturing event elements via a manufacturing system. Therefore, since the combination of Yang and Luce disclose the elements of the claim and since both Yang and Luce suggest motivation to combine the references, Examiner maintains that the combination does sufficiently establish a prima facie case of obviousness.

(5): Examiner respectfully disagrees. Independent claim 6 is rejected under 35 U.S.C 102(e) under Yang, not Luce. See rejection above.

(6)-(8): Examiner respectfully disagrees. See rejection above.

(9)-(11): Examiner respectfully disagrees. Claim 22 (apparatus-claim), in the preamble recites: "the computer-readable medium wherein the plurality of entities include:". As admitted by the Examiner and acknowledged by the Applicant on the remarks regarding claim 22, the IC-design house deals with multiple suppliers that provide various outsourcing functions at different supplier stages. In the broadest reasonable

interpretation of the term "at least one entity derived from a computer-readable medium and associated with a manufacturer" is also a product of the multistage supply chain environment for multiple buyers and multiple suppliers. In addition, Yang discloses wherein the semiconductor manufacturing industry, in order to procure finished goods consist of a number of suppliers interlinked in the supply chain system, for example a buyer may order assembly from an assembly supplier or wafers from a fab supplier. Therefore, Examiner maintains that Yang does teach and suggest these limitations.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOB CHUMPITAZ whose telephone number is (571)270-5494. The examiner can normally be reached on M-TR: 7:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN WEISS can be reached on (571) 272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-270-6494.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

B. C.

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